

**REMARKS**

With respect to the objections to the Specification, applicant draws attention to the amendment to page 3, lines 7-11 found in the paper filed October 2, 2003. Accordingly, the issue of proper antecedent basis should now be moot.

The allowance of Claim 6 is noted with appreciation. The objection thereto has been addressed by deletion of the term "pyrometry."

The rejection of Claims 1 and 3-6 under 35 U.S.C. §112 paragraph 2 is traversed, and reconsideration is requested.

The term "pyrometric" is no longer an issue in view of the proffered amendments. Likewise, the point raised in paragraph 6 seems to be addressed by applicant's previous amendment to page 3, lines 7-11 of the specification as noted above.

Claims 3-5 have now been amended to set forth a positive step or steps. The "how" of what the method accomplishes is the function of the disclosure where an adequate description was originally provided. For the same reason, the rejection of Claims 3-5 under 35 U.S.C. §101 is traversed, and reconsideration is respectfully requested.

The rejection of Claims 1 and 3-5 as being unpatentable over Richards in view of Timmons and Tal under 35 U.S.C. § 103(a) is traversed, and reconsideration is also respectfully requested.

The hypothetical combination of Richards, Timmons and Tal would not have been made without the benefit of impermissible hindsight and would not, in

any event, result in the device of Claim 1 or the practice of that device as set forth in Claims 3-5.

The device disclosed in Richards is a tensiometer used to measure the condition of water in soil for determining irrigation needs. One of ordinary skill in the art to which the present invention is directed would never have looked to the field in which Richards is located as would be true with respect to the tensiometer of Tal. Indeed, Tal does not even teach the use of the claimed rubber cap as suggested in the Office Action but only a rubber cap through which a capillary tube is placed. This is not a teaching of a rubber cap with more than one hole, one hole being for connection to a vacuum pump and another for a capillary suction tube.

Even if certain of the teachings of the Richards and Tal tensiometers would arguably have been combinable (even though they would not result in the structure claimed in the present application), it is clear that one of ordinary skill in the art to which the present invention is directed would not have looked to the tensiometer field for suggestions and clearly would not have thought to combine tensiometer features with the lysimeter of Timmon which, unlike the present invention, uses synthetic resins whereby the sample collected is less representative of the soil at a selected location than is desired. The use of porous porcelain in the present invention provides higher efficiency.

The lysimeter of Timmons is totally unlike the tensiometer of Richards and Tal in both structure and intended operation. Specifically, lysimeters like

that of Timmons and devices like that of the present invention are not designed or intended to be filled with water that is to reach equilibrium with the soil matrix, to measure pressure differences or to determine soil humidity at a specific location. Instead, the device of the present invention is designed to form a vacuum therein in order to allow water to flow from the soil matrix to the interior of the capsule over a one or two day period in order to extract a sample from a given depth for subsequent analysis. In the Tal tensiometer, however, the water flows from inside the capsule to the exterior to create a pressure drop representative of the soil humidity.

Therefore, to say that the methods of Claims 3-5 would have been obvious because the hypothetical Richards/Timmons/Tal device “may be used” for the claimed purposes is a conclusion based upon no substantial record evidence. Moreover, the “recognized equivalents” argument with regard to the claimed porcelain capsule is also seen to be without any merit. The Office Action asserts that Richards “fails to explicitly disclose that the capsule is made from porcelain.” The “recognized equivalents” argument dissolves, however, in the face of the fact that the Richards patent is directed to a tensiometer.

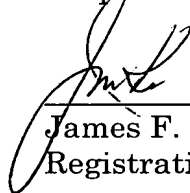
Some question always arises when more than two references are combined as a basis to assert obviousness although, of course, it is proper to do so where the teachings in the references clearly permit the combination. It is quite another thing, however, to combine, as here, features of very different types of devices (e.g. tensiometers and lysimeters) to make the combination.

Accordingly, early and favorable action is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #3582/49228).

Respectfully submitted,



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July 19, 2004

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